



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/519,591

12/27/2004

Christian Jansen

19357-099934

9493

7590

12/22/2008

Robin W Asher
Clark Hill
500 Woodward Avenue
Suite 3500
Detroit, MI 48226-3435

EXAMINER

IRVIN, THOMAS W

ART UNIT

PAPER NUMBER

3657

MAIL DATE

DELIVERY MODE

12/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,591	Applicant(s) JANSEN ET AL.	
	Examiner THOMAS W. IRVIN	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-32 is/are pending in the application.
- 4a) Of the above claim(s) 20-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-19, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings were received on 15 September 2008. These drawings are accepted by the examiner.

Specification

The amendments to the specification were received on 15 September 2008. These amendments are accepted by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-14, 31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mould (3,618,730) in view of Haase (773,320).

In Re claims 1, 31, and 32, Mould discloses a decoupler assembly for transferring torque between a shaft and a drive belt, said decoupler assembly comprising: a hub (10,13) configured to be fixedly assembled to a shaft (11), said hub including a first hooked slot (28) formed therein; a carrier (18,20) rotatably mounted on said hub, said carrier including a hooked slot (32) and a second hooked slot (40) formed

Art Unit: 3657

therein; a torsion spring (24) extending between a hub end and a carrier end for transferring torque between said hub and carrier, wherein said hub end is retained in said hooked first slot to prevent relative movement between said hub end of said torsion spring and said hub and said carrier end is retained in said hooked second slot to prevent relative movement between said carrier end of said torsion spring and said carrier; a pulley (outer most portion of 12) rotatably coupled to said hub via a bearing member portion (right most cylindrical portion of the pulley 12), said pulley having an outer periphery configured to frictionally engage with the drive belt, said pulley having an inner surface formed therein; and a clutch spring (36) extending between a hooked proximal end (38) and an opposite distal end (42), wherein said hooked proximal end is retained in said hooked slot to prevent relative movement between said hooked proximal end of said clutch spring and said carrier, said clutch spring including a plurality of helical coils frictionally engaging with said inner surface of said pulley to selectively couple said hub and pulley, said torsion spring and said clutch spring wound in opposite senses enabling said clutch spring to expand into gripping engagement with said inner surface during acceleration of said pulley relative to said hub and to contract out of gripping engagement with said inner surface during deceleration of said pulley relative to said hub. In Re claim 32, the examiner notes that the right most cylindrical portion of the pulley is considered to meet the broad limitation of a "bearing member". Mould fails to teach helical slots.

Haase teaches fixing a spring (11,15) to a member (12,16) via a helical slot (see end of springs). It would have been obvious to one of ordinary skill in the art at the time

Art Unit: 3657

the invention was made to have modified any of the slots of Mould to be helical slots, as taught by Haase, as a matter of design choice to securely hold the spring without the need for a hooked end on the spring, or a transverse slot formed in the carrier or hub to position the hooked end portion of the spring within.

In Re claims 2-5, see flange (13) in fig. 1 of Mould.

In Re claim 6, in the apparatus as modified, the helical slot would be formed in the flange portion.

In Re claims 7 and 8, see left most end of hub in fig. 1 of Mould.

In Re claim 9, the carrier is ring shaped.

In Re claim 10, in the apparatus as modified, the second helical slot would be formed in place of the hooked slot (32).

In Re claims 12 and 13, see hooked slot (40).

In re claim 14, the clutch spring includes a non-circular cross-section.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mould (3,618,730) in view of Haase (773,320) as applied to claim 14 above, and further in view of Monahan et al. (5,598,913).

Mould, as modified, fails to teach a bearing member.

Monahan et al. teach including a bearing (20) on the backside of a pulley (18) which rotates freely about a hub (16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of

Art Unit: 3657

Mould to include a bearing member between the pulley and the hub, as taught by Monahan et al., to reduce friction between the two components.

Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mould (3,618,730), Haase (773,320), and Monahan et al. (5,598,913) as applied to claim 15 above, and further in view of Monahan et al. (6,394,248).

In Re claim 16, Mould, as modified, fails to teach a first and second lubricant.

Monahan et al. teach using a first and second lubricant, one for the bearing (see col. 7, lines 1-10), and one for the clutch spring (see col. 9, lines 36-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included lubricants, as taught by Monahan, to reduce friction and thus lengthen the life of the apparatus.

In Re claim 17 see fig. 2 of Monahan et al. (5,598,913).

In Re claim 18, see washer (not labeled) seated on said outer mounting surface of said reduced diameter portion (left most washer in fig. 1 of Mould).

In re claim 19, Monahan et al. teaches press fitting the bearing race(col. 6, lines 4-9).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **THOMAS W. IRVIN** whose telephone number is (571)270-3095. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas W. Irvin/
Examiner, Art Unit 3657

/Bradley T King/
Primary Examiner, Art Unit 3657